

Current Claims:

1. (Currently Amended) An apparatus for debugging source code, the apparatus comprising:
a programmable hardware device configured to execute a plurality of executable code modules, the executable code modules comprising:
a source code debugger configured to display state information; and
a function selector configured to enable a user to select a target function and
associate a plurality of initialization routines with the target function;
the function selector configured to generate an execution request in response to
selection of the target function by the user;
a task dispatcher configured to dispatch the plurality of initialization routines and
the target function in response to receiving the execution request; and
the plurality of ~~at least one~~ initialization routines configured to initialize a target
environment to a particular state, including initializing at least one hardware component
and at least one local variable, the at least one initialization routine selectively coupled by
the user to a the target function within a target application.
2. (Canceled)
3. (Canceled)
4. (Original) The apparatus of claim 3, wherein the function selector is integrated into the source code debugger.
5. (Original) The apparatus of claim 1, wherein the particular state corresponds to an application error.

6. (Original) The apparatus of claim 1, further comprising a deployed system configured to dump information used to initialize the target environment to the particular state.
7. (Original) The apparatus of claim 1, wherein the at least one initialization routine comprises a function independent initialization routine and a function dependent initialization routine.
8. (Original) The apparatus of claim 1, wherein the source code debugger is further configured to single step through the target function.
9. (Currently Amended) A method for debugging source code, the method comprising:
enabling a user to select a target function and associate a plurality of initialization routines with the target function;
generating an execution request in response to selection of the target function by the user;
dispatching the plurality of ~~at least one~~ initialization routines and the target function in response to receiving the execution request selectively coupled to a target function, the at least one initialization routine selectively coupled by the user to the target function within a target application and configured to initialize a target environment to a particular state; and
initializing the target environment to the particular state, including initializing at least one hardware component and at least one local variable.
~~dispatching the target function; and~~
~~displaying state information within a source code debugger.~~
10. (Original) The method of claim 9, further comprising collecting state information from a deployed environment.

11. (Original) The method of claim 9, further comprising collecting state information in response to an application error.
12. (Original) The method of claim 9, wherein dispatching the at least one initialization routine comprises dispatching a function independent initialization routine and a function dependent initialization routine.
13. (Original) The method of claim 9, further comprising single stepping through the target function.
14. (Original) The method of claim 9, further comprising recompiling kernel mode code into user mode code.
15. (Currently Amended) An apparatus for debugging source code, the apparatus comprising:
a programmable hardware device configured to execute a plurality of executable code modules, the executable code modules comprising:
means for enabling a user to select a target function and associate a plurality of initialization routines with the target function;
means for generating an execution request in response to selection of the target function by the user;
means for dispatching the plurality of initialization routines and the target function in response to receiving the execution request, the plurality of initialization routines selectively coupled by the user to the target function within a target application and configured to initialize a target environment to a particular state; and
means for initializing the target environment to the particular state, including means for initializing at least one hardware component and at least one local variable.

~~dispatching the at least one initialization routine selectively coupled to a the target function, the at least one initialization routine configured to initialize a target environment to a particular state;~~

~~means for dispatching the target function; and~~

~~means for displaying state information.~~

16. (Original) The apparatus of claim 15, further comprising means for collecting state information from a deployed environment.

17. (Original) The apparatus of claim 15, further comprising means for collecting state information in response to an application error.

18. (Original) The apparatus of claim 15, further comprising means for single stepping through the target function.

19. (Currently Amended) A system for debugging source code, the system comprising:

a target environment comprising a programmable hardware device configured to execute a target platform including an operating system and a target application;

~~a source code debugger configured to display state information; and~~

a function selector configured to enable a user to select a target function and associate a plurality of initialization routines with the target function;

the function selector configured to generate an execution request in response to selection of the target function by the user;

a task dispatcher configured to dispatch plurality of initialization routines and the target function in response to receiving the execution request; and

~~the at least one plurality of initialization routines selectively coupled by the user to the target function within a target application and configured to initialize the target environment to a particular state, including initializing at least one hardware component and at least one local variable, the at least one initialization routine selectively coupled to a target function within the target application.~~

20. (Original) The system of claim 19, further comprising a deployed system configured to provide information used to initialize the target environment to the particular state.

21. (Currently Amended) A computer readable storage medium comprising computer readable program code for debugging source code, the program code configured to conduct a method comprising:

enabling a user to select a target function and associate a plurality of initialization routines with the target function;
generating an execution request in response to selection of the target function by the user;
dispatching the plurality of initialization routines and the target function in response to receiving the execution request, the at least one initialization routine selectively coupled by the user to the target function within a target application and configured to initialize a target environment to a particular state; and
initializing the target environment to the particular state, including initializing at least one hardware component and at least one local variable.
~~enable selection of a target function;~~
~~dispatch at least one initialization routine selectively coupled to the target function, the at least one initialization routine configured to initialize a target environment to a particular state;~~
~~and~~
~~dispatch the target function.~~

22. (Original) The computer readable storage medium of claim 21, wherein the method further comprises collecting state information from a deployed environment.

23. (Original) The computer readable storage medium of claim 21, wherein the method further comprises collecting state information in response to an application error.

24. (Original) The computer readable storage medium of claim 21, wherein dispatching the at least one initialization routine comprises dispatching a function independent initialization routine and a function dependent initialization routine.

25. (Original) The computer readable storage medium of claim 21, wherein the method further comprises single stepping through the target function.

26. (Original) The computer readable storage medium of claim 21, wherein the method further comprises recompiling kernel mode code into user mode code.